

What is claimed is:

1. A modified neurotoxin comprising a neurotoxin including a structural modification, wherein the structural modification is effective to alter the biological persistence of the modified neurotoxin relative to an identical neurotoxin without the structural modification, and wherein the modified neurotoxin is structurally different from a naturally occurring neurotoxin.
- 10 2. The modified neurotoxin of claim 1, wherein the structural modification includes the presence of one or more secondary modification sites in addition to the ones that are already naturally present.
- 15 3. The modified neurotoxin of claim 2, wherein the secondary modification site is a member selected from the group consisting of N-glycosylation, casein kinase II (CK-2) phosphorylation, N-terminal myristylation, 20 protein kinase C (PKC) phosphorylation and tyrosine phosphorylation sites.
- 25 4. The modified neurotoxin of claim 1, wherein the structural modification includes the absence of one or more secondary modification sites.
- 30 5. The modified neurotoxin of claim 4, wherein the secondary modification site is a member selected from the group consisting of N-glycosylation, casein kinase II (CK-2) phosphorylation, N-terminal myristylation, 35 protein kinase C (PKC) phosphorylation and tyrosine phosphorylation sites.
6. The modified neurotoxin of claim 1, wherein the structural modification is effective to increase the biological persistence of the modified neurotoxin relative to an identical neurotoxin without the structural modification.

7. The modified neurotoxin of claim 1, wherein the structural modification is effective to decrease the biological persistence of the modified neurotoxin relative to an identical neurotoxin without the
5 structural modification.

8. A method for making a modified neurotoxin, the method comprising the step of producing a polypeptide from an oligonucleotide having codes for a neurotoxin
10 including a structural modification, wherein the structural modification is effective to alter the biological persistence of the modified neurotoxin relative to an identical neurotoxin without the structural modification, and wherein the neurotoxin is
15 structurally different from a naturally occurring neurotoxin.